

SEARCH REQUEST FORM

123214*

Requestor's
Name:

BERCH

Serial

Number:

10/679451

Date:

5/28/04

Phone:

571-272-0663

Art Unit:

1624

Office

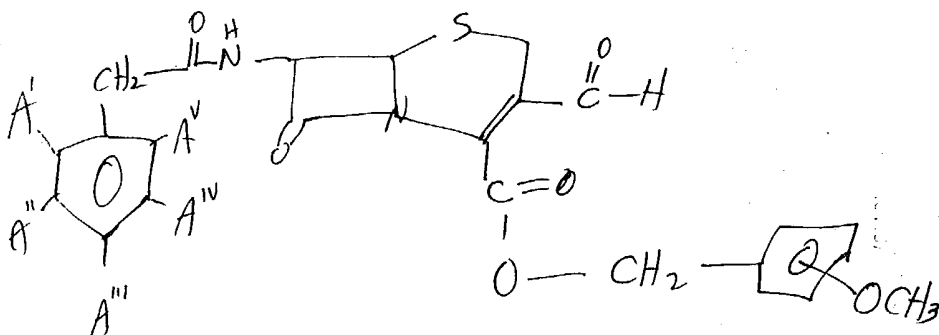
Perm 5C01

Mailbox

5C18

Search Topic:

Please write a detailed statement of search topic. Describe specifically as possible the subject matter to be searched. Define any terms that may have a special meaning. Give examples or relevant citations, authors, keywords, etc., if known. For sequences, please attach a copy of the sequence. You may include a copy of the broadest and/or most relevant claim(s).



all A = H/CH₃

must be mult. component

and have exactly 2 components

pp 8

Point of Contact:

Alexandra Wacławiw

Date completed:

Searcher:

Terminal time:

Elapsed time:

CPU time:

Total time:

Number of Searches:

Number of Databases:

STAFF USE ONLY

Search Site

☒ STIC

☒ CM-1

☐ Pre-S

Type of Search

☐ N.A. Sequence

☐ A.A. Sequence

☐ Structure

☐ Bibliographic

Vendors

☐ IG

☒ STN

☐ Dialog

☐ APS

☐ Geninfo

☐ SDC

☐ DARC/Questel

☐ Other

12

4

16

R.U. 6-3-04

Mark Berch 10/679,451

=> d his

(FILE 'REGISTRY' ENTERED AT 10:10:22 ON 03 JUN 2004)
DEL HIS Y
ACT BERCH679/A

L1 STR
L2 3 SEA FILE=REGISTRY SSS FUL L1

L3 1 S 332347-65-6

FILE 'CAPLUS' ENTERED AT 10:10:58 ON 03 JUN 2004
L4 1 S L3

=> fil reg

FILE 'REGISTRY' ENTERED AT 10:15:08 ON 03 JUN 2004

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

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Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 2 JUN 2004 HIGHEST RN 688737-01-1

DICTIONARY FILE UPDATES: 2 JUN 2004 HIGHEST RN 688737-01-1

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 6, 2004

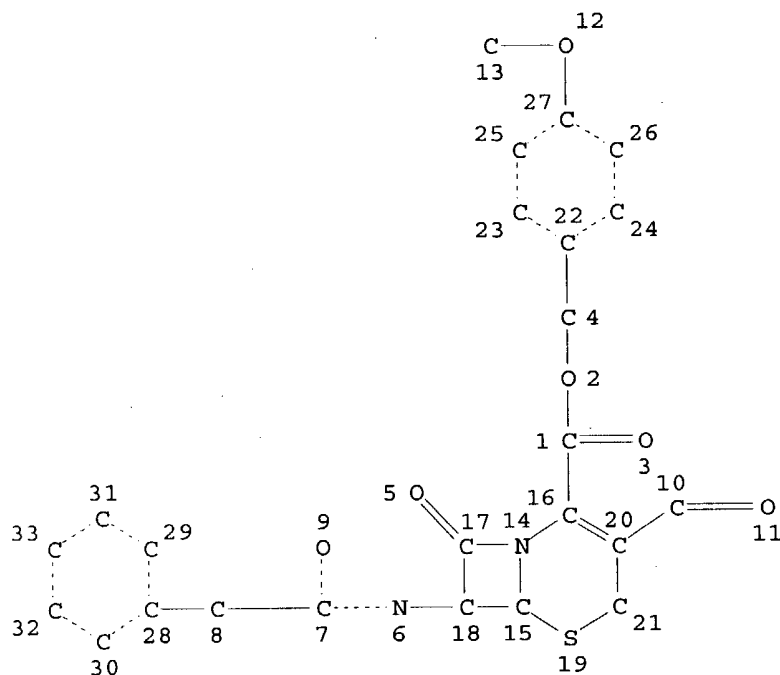
Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:
<http://www.cas.org/ONLINE/DBSS/registryss.html>

=> d que stat l2

L1 STR



NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 33

STEREO ATTRIBUTES: NONE

L2 3 SEA FILE=REGISTRY SSS FUL L1

100.0% PROCESSED 2834 ITERATIONS

3 ANSWERS

SEARCH TIME: 00.00.01

=> d 12 1-3

L2 ANSWER 1 OF 3 REGISTRY COPYRIGHT 2004 ACS on STN

RN 332347-65-6 REGISTRY

CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid,
3-formyl-8-oxo-7-[(phenylacetyl)amino]-, (4-methoxyphenyl)methyl ester,
(6R,7R)-, compd. with N,N-dimethylformamide (1:1) (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Formamide, N,N-dimethyl-, compd. with (4-methoxyphenyl)methyl
(6R,7R)-3-formyl-8-oxo-7-[(phenylacetyl)amino]-5-thia-1-
azabicyclo[4.2.0]oct-2-ene-2-carboxylate (1:1) (9CI)

FS STEREOSEARCH

MF C24 H22 N2 O6 S . C3 H7 N O

SR CA

LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

DT.CA Caplus document type: Patent

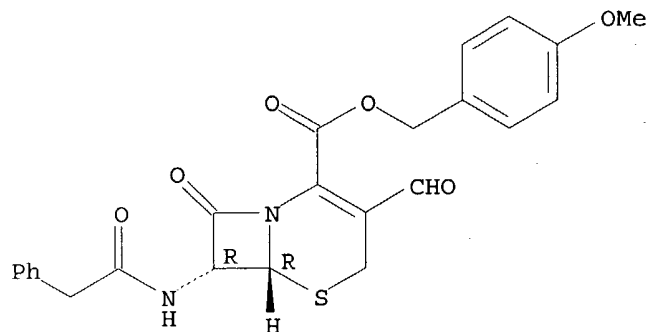
RL.P Roles from patents: PREP (Preparation)

CM 1

CRN 131528-29-5

CMF C24 H22 N2 O6 S

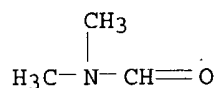
Absolute stereochemistry.



CM 2

CRN 68-12-2

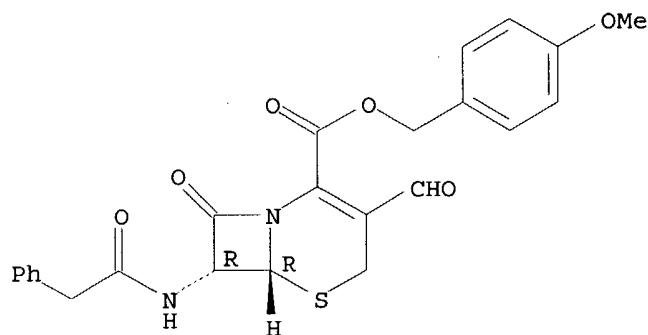
CMF C3 H7 N O



1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 2 OF 3 REGISTRY COPYRIGHT 2004 ACS on STN
RN 131528-29-5 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid,
3-formyl-8-oxo-7-[(phenylacetyl)amino]-, (4-methoxyphenyl)methyl ester,
(6R,7R)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid,
3-formyl-8-oxo-7-[(phenylacetyl)amino]-, (4-methoxyphenyl)methyl ester,
(6R-trans)-
OTHER NAMES:
CN 7-Phenylacetamido-3-formyl-3-cephem-4-carboxylic acid p-methoxybenzyl
ester
FS STEREOSEARCH
MF C24 H22 N2 O6 S
CI COM
SR CA
LC STN Files: CA, CAPLUS, CASREACT, CHEMINFORMRX, TOXCENTER, USPATFULL
DT.CA Caplus document type: Journal; Patent
RL.P Roles from patents: PREP (Preparation); PROC (Process); RACT (Reactant
or reagent)
RL.NP Roles from non-patents: PREP (Preparation); RACT (Reactant or reagent)

Absolute stereochemistry.

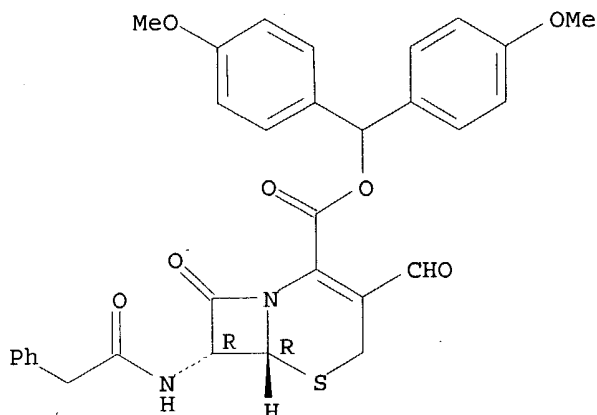


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

7 REFERENCES IN FILE CA (1907 TO DATE)
7 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 3 OF 3 REGISTRY COPYRIGHT 2004 ACS on STN
RN 35262-99-8 REGISTRY
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid,
3-formyl-8-oxo-7-[(phenylacetyl)amino]-, bis(4-methoxyphenyl)methyl ester,
(6R-trans)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C31 H28 N2 O7 S
LC STN Files: CA, CAPLUS, TOXCENTER
DT.CA Caplus document type: Patent
RL.P Roles from patents: PREP (Preparation)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

=> d que 13
L3

1 SEA FILE=REGISTRY ABB=ON PLU=ON 332347-65-6

=> fil caplus

FILE 'CAPLUS' ENTERED AT 10:15:28 ON 03 JUN 2004
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
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↳ multi component

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FILE COVERS 1907 - 3 Jun 2004 VOL 140 ISS 23
FILE LAST UPDATED: 2 Jun 2004 (20040602/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

'OBI' IS DEFAULT SEARCH FIELD FOR 'CAPLUS' FILE

=> d que nos 14

L3 1 SEA FILE=REGISTRY ABB=ON PLU=ON 332347-65-6
L4 1 SEA FILE=CAPLUS ABB=ON PLU=ON L3

=> d .ca hitstr

L4 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2001:247342 CAPLUS

DOCUMENT NUMBER: 134:280643

TITLE: 3-Cephem derivative crystal and method for preparing the same

INVENTOR(S): Moriyoshi, Takashi; Uosaki, Yasuhiro; Kameyama, Yutaka; Suzuki, Daisuke; Seo, Yoshiko

PATENT ASSIGNEE(S): Otsuka Kagaku Kabushiki Kaisha, Japan

SOURCE: PCT Int. Appl., 32 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001023393	A1	20010405	WO 2000-JP6693	20000928
W: CN, KR, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
JP 2001163888	A2	20010619	JP 2000-260682	20000830
JP 2002145885	A2	20020522	JP 2000-290561	20000925
EP 1227100	A1	20020731	EP 2000-962912	20000928
EP 1227100	B1	20040526		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY				
US 2004073023	A1	20040415	US 2003-679451	20031007
PRIORITY APPLN. INFO.:				
			JP 1999-278535	A 19990930
			JP 1999-279080	A 19990930
			JP 2000-267059	A 20000904
			WO 2000-JP6693	W 20000928
			US 2002-89194	A3 20020327

AB A method for preparing crystals of a 3-cephem derivative is characterized in that it comprises subjecting a 3-cephem derivative in the form of an amorphous powder or an oil to crystallization by the use of a good solvent and a poor solvent comprising carbon dioxide in a supercrit. or subcrit. state, thereby giving a cephem derivative in a crystalline state. This process has the following advantages: (1) crystalline compound is obtained from an amorphous powder or an oil; (2) single crystallization procedure gives a compound of high purity; (3) the desired product is obtained by just removing CO₂, which results in low energy cost for drying; (4) the desired component is rapidly crystallized from a tar-like viscous reaction liquid due to large dispersibility of a subcrit. liquid; (5) carbon dioxide is non-polluting, inflammable, inexpensive, and readily recyclable; and (6) once a 3-cephem derivative in a crystalline state is obtained by crystallization using subcrit. or subcrit. CO₂ as a poor solvent, from thenceforth a crystalline 3-cephem derivative is quite readily obtained from an amorphous powder or an oil without using a supercrit. or subcrit. CO₂. In particular, this process gives highly stabilized, yet highly reactive 7-phenylacetamido-3-formyl-3-cephem-4-carboxylic acid p-methoxybenzyl ester (I), which is useful as an intermediate for cefixime. Thus, a solution of 120 g I (amorphous powder) in 120 mL DMF containing 2% H₂O was placed in a 500 mL pressure vessel fitted with a sintered filter, pressurized with CO₂ to 15 MPa at 35°.

warmed to 45° and stirred for 30 min. The precipitated crystals were filtered at 45°, washed with 100 g subcrit. CO₂ (35°), and depressurized to give 120.8 g crystalline I containing 50 mol% DMF (95% purity) as an inclusion complex in 94.0% yield.

IC ICM C07D501-12

ICS C07D501-24

CC 26-5 (Biomolecules and Their Synthetic Analogs)

IT 332347-65-6P

RL: PUR (Purification or recovery); SPN (Synthetic preparation); PREP (Preparation)

(preparation of cephem derivative crystal from amorphous powder or oil by crystallization using subcrit. carbon dioxide as poor solvent)

IT 332347-65-6P

RL: PUR (Purification or recovery); SPN (Synthetic preparation); PREP (Preparation)

(preparation of cephem derivative crystal from amorphous powder or oil by crystallization using subcrit. carbon dioxide as poor solvent)

RN 332347-65-6 CAPLUS

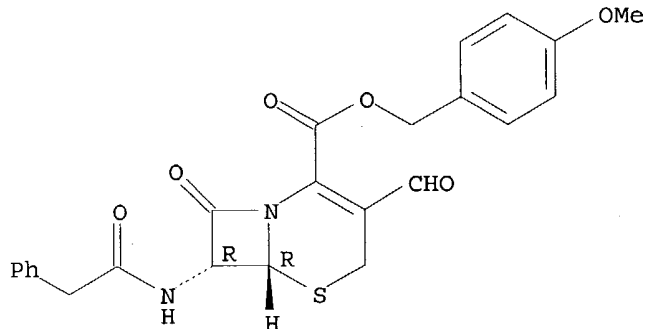
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-formyl-8-oxo-7-[(phenylacetyl)amino]-, (4-methoxyphenyl)methyl ester, (6R,7R)-, compd. with N,N-dimethylformamide (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 131528-29-5

CMF C24 H22 N2 O6 S

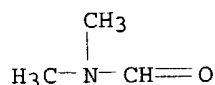
Absolute stereochemistry.



CM 2

CRN 68-12-2

CMF C3 H7 N O



REFERENCE COUNT:

15

THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

Mark Berch 10/679,451

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